

What is claimed is:

1. A file management system for managing electronic files on one or more volumes, the file management system comprising:

a user interface that enables a user to view and manage, within the file management system, metadata associated with the electronic files;

a volume manager that manages the electronic files and metadata relating to such files on one or more volumes; and

a coherency manager that manages one or more of: i) versions of files; and ii) related files, based on metadata associated with files, within or among the one or more volumes.

2. The system of claim 1, wherein the metadata includes automatically generated metadata and user defined metadata.

3. The system of claim 1, further comprising version control means for automatically managing versions of an electronic file through the file management system based on opening, saving and changing of a file.

4. The system of claim 1, further comprising means for enabling certain actions to occur automatically based on predetermined events, including changes to the metadata, to facilitate workflow.

5. The system of claim 1, further comprising a user interface that enables a user to view and manage, within the file management system, metadata associated with the electronic files, the user interface:

graphically displaying information about the files and the metadata; and
enabling the user to manipulate the files and the metadata.

6. The system of claim 1, wherein the system organizes files based on content-addressability.

7. The system of claim 1, further comprising a customizable taxonomy to organize and manage files.

8. The system of claim 1, wherein files are classified and organized by one or more tags.

9. The system of claim 1, wherein representations of a single file can appear in more than one folder.

10. The system of claim 1, further comprising means for automatic versioning in the file system based on opening, changing and saving file in its native application.

11. The system of claim 1, further comprising means for enabling automatic workflow.

12. The system of claim 1, further comprising means for enabling event-driven triggers.
13. The system of claim 1, further comprising means for enabling event-driven actions to facilitate sharing and access control of content.
14. The system of claim 1, wherein the system uses tags to control actions.
15. The system of claim 1, wherein the system uses tags to control or specify workflow.
16. The system of claim 1, wherein the user interface comprises means for enabling a user to view or change tags.
17. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the name of a folder is used to perform a query to dynamically determine contents of the folder.
18. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include dynamic folders.
19. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders are automatically updated in real time.

20. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders are persistent.

21. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include various folder types including one or more of Query, Search, Merge, Magnetic, and Typed.

22. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include Query folders, wherein the Query folders perform queries based on tags that encapsulate search criteria and matching objects are associated with the Query folder.

23. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include Search folders, wherein the Search folders perform free text searches and wherein matching objects are associated with the folder.

24. The system of claim 23, wherein the Search folders are integrated with at least one search engine.

25. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include Merge folders that combine content of two or more other folders.

26. The system of claim 25, wherein the folders are combined using Boolean logic or otherwise.
27. The system of claim 25, further comprising a merge list of folders to be merged.
28. The system of claim 25, wherein the merge occurs in real-time.
29. The system of claim 25, wherein changes in related folders results in changes to the Merge folder.
30. The system of claim 1, further comprising the use of a combination of Query and Search Folders with Merge Folders.
31. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include Magnetic folders that disable removal if a file ever matches a query associated with the folder.
32. The system of claim 1, further comprising folders to facilitate the categorization of content, wherein the folders include Typed folders that store and retain certain types of files.
33. The system of claim 1, wherein the system is transactionally based.

34. The system of claim 1, wherein the system is transactionally based and changes to files or folders are applied in an all or none fashion.

35. The system of claim 1, wherein the system is transactionally based wherein for each action, the system keeps a record of what was done, by whom, when, why and other desired information.

36. The system of claim 1, wherein the system is transactionally based, and the system further comprises a show history feature.

37. The system of claim 36, further comprising a view history feature that enables a user to view what used to be in folder but was deleted or moved.

38. The system of claim 36, wherein the user interface enables a user to open and explore what used to be in a folder but was deleted or moved and to Undelete or Bring Back changed content.

39. The system of claim 36, further comprising an Undo feature.

40. The system of claim 39, wherein the Undo feature includes a dialog box in the user interface that brings up changes to a file or folder and an option to undo one or more changes to a file, folder or folder hierarchies.

41. The system of claim 36, wherein the system enables an As of View.
42. The system of claim 1, further comprising means for enabling a user to freeze files or folders such that a user cannot modify such files or folders, and cannot modify tags associated with the frozen files or folders.
43. The system of claim 1, further comprising means for enabling a user to freeze files or folders and further comprising the use of hash codes to verify the integrity of frozen content.
44. The system of claim 1, further comprising a version control feature.
45. The system of claim 1, further comprising a version control feature, wherein the version control feature includes a Show Versions feature that displays all past versions, frozen files and provides a make current option.
46. The system of claim 1, further comprising a version control feature, wherein the version control feature includes a Snapshot feature that copies, freezes and associates with past versions, who, when, and why changes were made.
47. The system of claim 1, further comprising Smart Copies, Live Copies, and Deferred Copies.

48. The system of claim 47, wherein Live Copies of files A and B initially refer to the same underlying data, and changes in one are reflected immediately in the other; and deleting one has no effect on the other.

49. The system of claim 47, wherein the copies can be on different volumes and managed via the coherency manager.

50. The system of claim 47, wherein Live Copies of folders or files are treated as one object with common metadata and version history regardless of location or number of copies.

51. The system of claim 47, wherein Deferred Copies of Files A and B are used when a “regular” copy is requested so that initially the volume manager knows A and B refer to the same file and initially share the same data, but when one is modified, the Volume Manager makes a copy of the underlying data and then each file has its own separate data.

52. The system of claim 51, wherein the system only allocates new space for a file or folder when a new/modified copy is needed.

53. The system of claim 51, wherein the files share previous version history.

54. The system of claim 51, wherein a user can copy a past version of A to a new file C, and wherein A and C will share the same version history up to the point where a copy was made.

55. The system of claim 1, wherein the system further comprises Smart Links that can be relative, absolute, a URL or sticky links.

56. The system of claim 1, wherein the system further comprises Smart Caching.

57. The system of claim 1, wherein the system further comprises Smart Back Up features.

58. The system of claim 1, wherein the system maintains and manages relationships, including versions and copies.

59. The system of claim 1, wherein the system maintains and displays hierarchy of versions, including modifications.

60. The system of claim 1, wherein the system maintains and displays hierarchy of copies.

61. The system of claim 1, wherein the system tracks movement and use of files.

62. The system of claim 1, wherein a versions feature enables versions to be marked as special, enables versions to appear in folders as regular files and icons in a user interface show which files are versions.

63. The system of claim 1, wherein a versions feature enables old versions to be displayed only upon request.

64. The system of claim 1, wherein a versions feature enables new versions to inherit metadata from previous files.

65. The system of claim 1, wherein a versions feature enables files to be frozen when versioned or by user when desired.

66. The system of claim 1, wherein the system is an integrated part of a computer operating system.

67. The system of claim 1, wherein the system is integrated with enterprise applications.

68. The system of claim 1, further comprising built-in work flow, whereby various actions can trigger updates to enterprise applications and enterprise applications can the update file system.